Wireless communication

In the first issue of *Tech Trend Notes,* wireless personal computing was described as "a rapidly emerging technology [that] will enable computer users to access information without the restrictions of landline-based systems" [1]. Today, of course, the term *wireless* includes smartphones, tablets, global positioning systems, laptops, netbooks, wireless computer accessories, remote controls, wireless network cards, and pretty much anything that does not use wires to transmit information [2].

Developments in radio frequency circuit fabrication, advanced digital signal processing, and several miniaturization technologies have made it possible to "deploy and deliver wireless communication services at the scale and scope that we see today" [3]. According to the International Telecommunication Union, mobile-cellular subscriptions have grown from 22.8 million worldwide in 1992 to 6.8 billion in 2013—almost one for every person on the planet [4].

In 1992, even though the wireless boom was just beginning, rumblings about the need for increased capacity and effective use of spectrum were heard. Articles in the early issues of *Tech Trend Notes* refer to the need for more cost-effective service delivery, increased system capacity, and effective utilization of spectrum [5, 6]. As discussed in the following article, those early rumblings have developed into a worldwide struggle between countries and corporations over use of the electromagnetic spectrum.